

WHAT IS CLAIMED IS:

- 1           1.     An electronic system comprising:  
2                 a first integrated circuit comprising:  
3                     an input buffer coupled between a first supply terminal and a second  
4 supply terminal and further coupled to receive an input signal on a pad; and  
5                     a clamp diode coupled between the pad and the first supply terminal; and  
6                     a resistor coupled to the pad, and further coupled to receive an input signal.
- 1           2.     The electronic system of claim 1 further comprising:  
2                 a second integrated circuit coupled to the resistor and to provide the input signal.
- 1           3.     The electronic system of claim 1 wherein the clamp diode has a anode and  
2 a cathode, the anode is coupled to the pad, and the cathode is coupled to the first supply terminal.
- 1           4.     The electronic system of claim 3 wherein the first supply terminal is  
2 configured to receive a positive supply voltage, and the second supply voltage is configured to  
3 receive a ground supply.
- 1           5.     The electronic system of claim 1 wherein the integrated circuit further  
2 comprises:  
3                 a pull-up output device coupled between the first supply terminal and the pad; and  
4                 a pull-down output device coupled between the pad and the second supply  
5 voltage.
- 1           6.     The electronic system of claim 5 wherein the pull-up device has a gate  
2 coupled to a first predriver circuit, and the pull-down device has a gate coupled to a second  
3 predriver circuit.
- 1           7.     The electronic system of claim 6 wherein the integrated circuit further  
2 comprises:  
3                 a core comprising a plurality of logic gates, and one of the logic gates is coupled  
4 to provide a signal to the first predriver.

1                   8.     The electronic system of claim 6 further comprising a switch coupled  
2 between the pad and clamp diode.

1                   9.     An electronic system comprising:  
2                   a first integrated circuit comprising:  
3                         an input buffer coupled between a first supply terminal and a second  
4 supply terminal and further coupled to receive an input signal on a pad; and  
5                         a series of clamp diodes coupled between the pad and the second supply  
6 terminal; and  
7                   a resistor coupled to the pad, and further coupled to receive an input signal.

1                   10.    The electronic system of claim 9 wherein the series of clamp diodes  
2 comprises four diodes.

1                   11.    The electronic system of claim 10 further comprising:  
2                   a second integrated circuit coupled to the resistor and to provide the input signal.

1                   12.    The electronic system of claim 9 wherein each of the clamp diodes in the  
2 series of clamp diodes has a anode and a cathode, the anode of one of the clamp diodes in the  
3 series of clamp diodes is coupled to the pad, and the cathode of one of the clamp diodes in the  
4 series of clamp diodes is coupled to the second supply terminal.

1                   13.    The electronic system of claim 12 wherein the first supply terminal is  
2 configured to receive a positive supply voltage, and the second supply voltage is configured to  
3 receive a ground supply.

1                   14.    The electronic system of claim 9 wherein the integrated circuit further  
2 comprises:  
3                   a pull-up output device coupled between the first supply terminal and the pad; and  
4                   a pull-down output device coupled between the pad and the second supply  
5 voltage.

1                   15.     The electronic system of claim 14 wherein the pull-up device has a gate  
2 coupled to a first predriver circuit, and the pull-down device has a gate coupled to a second  
3 predriver circuit.

1                   16.     The electronic system of claim 15 wherein the integrated circuit further  
2 comprises:  
3                   a core comprising a plurality of logic gates, and one of the logic gates is coupled  
4 to provide a signal to the first predriver.

1                   17.     An integrated circuit comprising:  
2                   a buffer having a first supply terminal, a second supply terminal, and an input;  
3                   a clamp circuit coupled between the input of the buffer and the first supply  
4 terminal of the buffer; and  
5                   a resistor coupled to the input of the buffer,  
6 wherein the claim circuit comprises a clamp diode.

1                   18.     The integrated circuit of claim 17 wherein the resistor is further coupled to  
2 a pad.

1                   19.     The integrated circuit of claim 18 wherein the clamp circuit comprises one  
2 diode having an anode and a cathode, the anode coupled to the input of the buffer and the  
3 cathode coupled the first supply terminal.

1                   20.     The integrated circuit of claim 19 wherein the clamp circuit comprises a  
2 series of diodes each having an anode and a cathode, the anode of a first diode in the series of  
3 diodes coupled to the input of the buffer, and the cathode of a last diode in the series of diodes  
4 coupled to the first supply terminal.

1                   21.     The integrated circuit of claim 18 further comprising:  
2                   an output driver comprising:  
3                   a pull-up device coupled between the first supply terminal and the input of  
4 the buffer; and

- 5 a pull-down device coupled between the input of the buffer and the second  
6 supply terminal.